APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,056	12/31/2001	Amnon Silverstein	10010658	1798

7590 05/12/2004	**EXAMINER**

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EXAMINER
RAHMJOO, MANUCHER

ART UNIT	PAPER NUMBER
2676	8

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No 10/040,056	Applicant(s) SILVERSTEIN, AMNON
	Examiner Mike Rahmjoo	Art Unit 2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1- 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claims 1, 10, and 16 applicant recites"...based on an un- weighted average of said first color...". The calculating of the intensity "based on an un- weighted average of said first color" was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1- 9 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

As per claim 1 line 3 on page 2 recites"...mapping a pixel area...". It is not clear

what the other areas of a display are due to the fact that the whole display area is "pixel

area"; i.e.; whether "area" can be defined differently due to the fact that there are no

none- pixel areas on the surface of a display.

As per claim 1 line 5 on page 2 recites"...based on intensity ..." and line 6

recites"...based on unweighted...". It is not clear if the calculating of the intensity is

based on both said criterion or just one criteria.

Further clarification of the above and other possible claims is respectfully

requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a
foreign country or in public use or on sale in this country, more than one year
prior to the date of application for patent in the United States.

Claims 1- 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Szeliski

et al US Patent 6,009,190, hereinafter, Szeliski.

As per claims 1,10 and 16 Szeliski teaches accessing said image, said image sampled at a higher spatial resolution than the spatial resolution of said display see for example figures 2- 7 column 13 lines 27- 31; and mapping a pixel area of a display to a region of said image, said area operable to display (see for example column 9 lines 30- 35) a first color of a plurality of colors see for example column 28 lines 39- 44;and based on intensity of said first color for all pixels comprising said first color in said region of said image(the pseudocolor associated with each **pixel inside**), based on an unweighted average of said first color for al pixels in said region (see for example column 20 lines 20- 43 wherein **average color** corresponding to **a pixel location** in a **triangle** along with **color or intensity** is used), calculating an intensity value (matching the face color id tag of the triangle) for said first color to be displayed in said pixel area of said display, wherein said region comprises an intensity value for each of said plurality of colors for each pixel included therein see for example column 29 lines 54- 67; and repeating the mapping and calculating for additional pixel areas of said display corresponding to additional regions of said image, mapping each pixel area to its own region, wherein said image is processed see for example column 29 lines 1- 3 and 54- 62 and figure 31(through repeating the steps for each triangle); and rendering said image on said display, based on said calculated intensities see for example column 27 lines 62- 67 and column 28 lines 1- 8.

As per claim 2 Szeliski teaches d) displaying said processed image on said display, said display providing for control over individual sub-pixels, wherein each area of said display corresponds to a sub-pixel operable to display a color see for example

column 9 lines 21- 35.

As per claim 3 Szeliski teaches averaging the intensity value of said first color over a plurality of regions neighboring said region of said image, wherein each of said areas maps to its own plurality of regions see for example column 30 lines 20- 21.

As per claims 4 and 7 Szeliski teaches based on the intensity of said first color in said plurality of regions of said image, calculating an intensity value for said first color see for example column 29 lines 54- 67; and calculating an error for said first color see for example column 11 lines 44- 56; and propagating said error for said first color for processing further regions of said image see for example column 32 lines 40- 42.

As per claim 5 Szeliski teaches using in the intensity value calculating an error that was propagated when processing another area for said first color see for example column 12 lines 48- 50.

As per claim 6 Szeliski teaches based on the intensity of said first color in said region of said image, calculating an uncompensated intensity value for said first color(computation of intensity through triangles with id tags) see for example column 29 lines 57- 67 and figure 31; and calculating an error for each of the rest of said plurality of colors within said region see for example column 11 lines 44- 56; and storing said errors (registration of errors) for said rest of said colors for processing further regions of said image see for example column 32 lines 43- 45; and calculating a compensated intensity value for said area(compensation through de- ghosting; a method for improving quality of image mosaics see for example column 32 line 37), based on said uncompensated intensity value and errors which were calculated for said first color when processing

·other image regions see for example column 32 lines 54- 58.

As per claim 8 Szeliski teaches filtering said image to prior to calculating the

intensity value for said first color to be displayed, thereby producing a filtered image

having a similar color scheme as said display see for example column 29 lines 18- 20.

As per claim 9 Szeliski teaches said output display has sub- pixel control

see for example column 9 lines 21- 35.

As per Claims 11- 15 and 17- 23, these claims are similar in scope to

claims 1- 9 and rejected under the same rational.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure; US patent 6,396,505, and 6,720,972.

Response to Arguments

Applicant's arguments filed 12/11/2003 have been fully considered but they are

not persuasive.

Applicant argues on page 9 of his remarks that calculating an intensity value

base on an **unweighted** average of said first color for all pixels in said region.

The examiner points out to the fact that **all pixels have weights** associated with

them and therefore calculating a value based on an **unweighted** average of said first

color is not feasible.

Color is defined as "a hue as contrasted with black, white or gray" and hue is defined as "gradation of color" according to Merriam- Webster's Collegiate Dictionary, 10th edition.

Applicant argues that Szeleski sums all colors and not just one color to find color intensities, and that Szeleski does not sum all reds separate from all of greens and separate from all of blues. In light of the dictionary meaning of "color", the examiner is broadly interpreting "color" as a color gradation or any one of the color spaces; e.g. RGB which is taught throughout Szeleski. The **summing** aspect of the different color primaries (e.g., red, green, and blue), on the other hand, is not seen through the claim language of the amended claims, an aspect which is clearly taught by Szeleski in columns 29- 30. The repeating step is clearly taught through steps 2- 4 in columns 28- 29 for each triangle (corresponding to additional pixel areas).

Applicant also argues on page 11 that the concept of using pseudocolor differs from "the first color" and also that the region comprises an intensity value for each set of colors. The examiner points out that Szeleski's uses 2 to the power of 24 colors which corresponds to applicant's "first color". Also an intensity value for each **set of colors** is not claimed through the claim language.

The examiner would suggest to incorporate the summing language on the basis of individual color primaries and individual color intensities into the claim language.
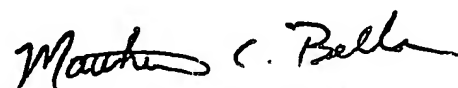
Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is (703) 305-5658. The examiner can normally be reached on 6:30- 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (703) 308- 6829. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872- 9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Mike Rahmjoo

May 3, 2004

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600